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EXAMINER

LAY, MICHELLE K

ART UNIT

PAPER NUMBER

2628

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/748,992

Applicant(s)

SIKORSKI, STEVEN MAURICE

Examiner

Michelle K. Lay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 02/15/2007 has been entered.

Response to Amendment

The amendment filed 02/15/2007 has been entered and made of record. Claims 1-17 have been cancelled. Claims 18-37 are pending.

Response to Arguments

Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the cancellation of the claims. A new ground(s) of rejection concerning the newly added claims 18-37 have been made below.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the ring-type mobile scanning terminal of claim 22 must be shown or the feature(s) canceled from the claim(s). Additionally, the graphical representation of the various store locations including the hierarchy comprising product aisles, product shelves, and single product locations of claim 25 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Furthermore, the determining component, and order history component of claims 26 and 28 respectfully, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 22 is rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The manner in which the mobile scanning terminal system further comprises a ring-type mobile scanning terminal is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). From the *Background of the Invention*, Applicant discloses, "A portable finger-worn scanning device called a "ring" scanner ..." [0008]. Furthermore, in accordance to an aspect of Applicant's invention, "A ring-type mobile scanning terminal device provides for the scanning of data and display manipulation based at least upon the orientation of a user. The ring-type mobile scanning terminal device can provide inverting and/or rotating the display based at least upon a user perspective." [0020, 0047]. From the limited description and Fig. 7, it is unclear how such a display can be implemented in a device such that it can be worn by finger.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim **22** is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the scanning device worn on a finger, and how the display is connected to such a device worn on a finger.

Claim Rejections - 35 USC § 103

1. Claims **18-21, 23, 24, 29-37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Browning (6,707,581 B1) in view of Manchester (2004/0201595 A1).

Browning teaches the limitations of claims 18-21, 23, 24, 29-37 with the exception of disclosing an orientation component that orients the images on the display in view of the user regardless of the position of the device. However, Manchester teaches a self-orienting display that senses the characteristics of an object and automatically rotates and reformats a display image in accordance with those characteristics.

In regards to claim **18**, the invention of Browning comprises a handheld scanner and information retrieval software. The software can retrieve information from a remote source or can be entirely incorporated within the handheld scanner (said ***mobile***

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device) [col. 2, lines 38-49]. As shown in Fig. 1, the scanner is incorporated within a personal digital assistant (PDA) (10). The scan is performed by sweeping the scan head (16) (said **image capture component**) of the handheld scanner (10) across printed media containing information of interest, such as a barcode product identifier on a label [col. 2 lines 50-57]. The handheld scanner (10) provides a LED/LCD display (22) for displaying the graphical objects (said **display**). Referring to Fig. 3, the scan head (16), decoder, and other integrated circuits are controlled by means of a microprocessor that is programmed with instructions to carry out the method of Browning (said **analysis component**) [col. 3 lines 48-51]. The electrical signals generated by the CCD in the scan head (16) are stored in a RAM (18) as a complete image [col. 3 lines 7-9] for subsequent presentation to a companion information-retrieval agent [col. 3 lines 31-33]. The handheld scanner can work in conjunction with a separate communications device to provide access to a remote source and retrieve information that is identified by the scan image [col. 4 lines 3-7]. Information can also be directly stored in the handheld scanner, in which case remote communications capabilities are not required [col. 4 lines 21-23]. In a playback mode, the retrieved information is displayed to the user immediately upon receipt (said **determines product identity**) [col. 5 lines 31-32]. This information would contain product information and location associated with the barcode (i.e. image) obtained by the information-retrieval agent either from a remote source, such as a personal computer or within the handheld scanner itself. In a storage mode, the retrieved information is stored for later viewing by the user at a time that may be more convenient [col. 5 lines 33-34].

Manchester discloses a self-orienting display that senses the characteristics of an object and automatically rotates and reformats a display image in accordance with those characteristics [0019]. Fig. 1 is an illustration of a self-orienting display (100) comprising a display device (12), a display image (14), a sensor (16), and optional control buttons (18). The self-orienting display (12) may be in the form of any appropriate display device capable of providing the display image (14), such as hand held devices (said **a mobile device**) [0020]. The sensor (16) may include a single sensor or a plurality of sensors [0020]. The sensors (16) can be positioned on the viewer (36) of Fig. 8 and/or on the display device (12) to sense the orientation of the viewer and/or display device [0027]. The display image (14) is oriented with respect to the orientation of the display (12). As the display device (12) oriented as shown in Fig. 1 is rotated, the display image (14) is automatically oriented, such that the appearance of the display image (14) appears to remain approximately stable regardless of the orientation of the display device (12) (said **rotates information to an optimal viewing orientation**) [0025]. The display image (14) may be in the form of a graphic display image, a textual display image, a video display image, and a functional control button (18), or a combination thereof. The display image (14) may comprise display image portions, such as display image portions (14a) and (14b). As depicted in Fig. 1, a graphic/video display type is provided by the display image portion (14a) and a text display type is provided by the display image portion (14b) [0022]. Manchester includes an authentication component by analyzing the sensed image, which is sensed by the camera (16b) [0036]. The sensed image maybe analyzed for key features [0036].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to orient the display of Browning with the invention of Manchester because the display image becomes difficult to read/see when the display device is turned or rotated [Manchester 0003]. Thus, by reorienting the display, in relation to how the user is holding such device, the display becomes easier to read.

In regards to claim 19, Browning teaches the scan is performed by sweeping the scan head (16) of the handheld scanner (10) across printed media containing information of interest, such as a barcode product identifier on a label [col. 2 lines 50-57]. The handheld scanner (10) provides a LED/LCD display (22) for displaying the graphical objects (said **display**). Thus, the signals (said **optical signals**) from the scan head are sent to the display to display an image of the product associated with barcode product identifier on a label that was scanned.

In regards to claim 20, Browning teaches the scan is performed by sweeping the scan head (16) of the handheld scanner (10) across printed media containing information of interest, such as a barcode product identifier on a label [col. 2 lines 50-57]. The handheld scanner (10) provides a LED/LCD display (22) for displaying the graphical objects (said **display**). Thus, the signals (said **optical signals**) from the scan head are sent to the display to display an image of the product associated with barcode product identifier on a label that was scanned. Additionally, Manchester teaches the display image (14) may be in the form of a graphic display image, a textual display image, a

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video display image, and a functional control button (18), or a combination thereof. The display image (14) may comprise display image portions, such as display image portions (14a) and (14b). As depicted in Fig. 1, a graphic/video display type is provided by the display image portion (14a) and a text display type is provided by the display image portion (14b) [0022]. The same rationale for combining as applied to claim 18 is incorporated herein.

In regards to claim 21, Manchester teaches the display image (14) is oriented with respect to the orientation of the display (12). As the display device (12) oriented as shown in Fig. 1 is rotated, the display image (14) is automatically oriented, such that the appearance of the display image (14) appears to remain approximately stable regardless of the orientation of the display device (12) (said *rotating information*) [0025]. The same rationale for combining as applied to claim 18 is incorporated herein.

In regards to claim 23, Browning teaches the scanner can include a speaker (27) which provides audible feedback to the user [col. 3 lines 41-47]. The claim language recites comprising a keypad, a touch screen or an audio/voice recognition component that provides feedback or input to the system, which limits the claim to needing only one of the limitations listed. Thus, the speaker providing audible feedback teaches such limitations

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In regards to claim **24**, Browning teaches the scanner can include a speaker (27) which provides audible feedback to the user [col. 3 lines 41-47].

In regards to claim **29**, claim 29 recites the same limitations as claim 18. Therefore, the same rationale used for claim 18 is applied. Furthermore, Browning teaches the handheld scanner can work in conjunction with a separate communications device to provide access to a remote source and retrieve information that is identified by the scan image (said **data retrieval**) [col. 4 lines 3-7]. Information can also be directly stored in the handheld scanner, in which case remote communications capabilities are not required [col. 4 lines 21-23].

In regards to claim **30**, claim 30 recites the same limitations as claim 19. Therefore, the same rationale used for claim 19 is applied.

In regards to claim **31**, Browning teaches by scanning a bar-coded label on a product, the system enables the user to connect to a web site hosted by the manufacturer of that product, to obtain additional information about the product or other products by that manufacturer. Furthermore, the internal database could directly provide the user with a limited amount of information about the product, e.g., suggested retail price. If the user desires additional information, a connection to the web site associate with that product can be initiated. The scanner can be used to input information about a product to a buying service or the like. For instance, when a product's bar-coded label is scanned,

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information about that product can be transmitted to the buying service, along with the indication of the user's desire to purchase that product [col. 7 lines 18-43]. Additionally, to facilitate later cataloguing and retrieval of scanned information, the scanner can include a clock which the microprocessor employs to stamp each stored entry with an associated data and time, which information is also presented to the information-retrieval agent, where the retrieval agent allows the user to view the scanned information and group by relevance, date and time, priority or topic [col. 3 lines 50-60]. Although Browning does not specifically disclose market share values of the scanned product, it would have been obvious to one of ordinary skill in the art that with the capability of the connection to the web site, such information can easily be obtained.

In regards to claim **32**, information can also be directly stored in the handheld scanner of Browning [col. 4 lines 21-23]. Additionally, in a storage mode, the retrieved information is stored for later viewing by the user at a time that may be more convenient [col. 5 lines 33-34].

In regards to claim **33**, the electrical signals generated by the CCD in the scan head (16) are stored in a RAM (18) as a complete image [col. 3 lines 7-9] for subsequent presentation to a companion information-retrieval agent [col. 3 lines 31-33]. The handheld scanner can work in conjunction with a separate communications device to provide access to a remote source and retrieve information that is identified by the scan image [col. 4 lines 3-7]. Information can also be directly stored in the handheld scanner,

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in which case remote communications capabilities are not required [col. 4 lines 21-23].

In a playback mode, the retrieved information is displayed to the user immediately upon receipt [col. 5 lines 31-32]. This information would contain product information and location associated with the barcode (i.e. image) obtained by the information-retrieval agent either from a remote source, such as a personal computer or within the handheld scanner itself. In a storage mode, the retrieved information is stored for later viewing by the user at a time that may be more convenient [col. 5 lines 33-34].

In regards to claims **34** and **35**, Manchester discloses a self-orienting display that senses the characteristics of an object and automatically rotates and reformats a display image in accordance with those characteristics [0019]. With reference to Fig. 8, the sensors (16) (said **sensor component**) can be positioned on the viewer (36) and/or on the display device (12) to sense the orientation of the viewer and/or display device (said **according to user state**) [0027]. The display image (14) is oriented with respect to the orientation of the display (12). As the display device (12) oriented as shown in Fig. 1 is rotated, the display image (14) is automatically oriented, such that the appearance of the display image (14) appears to remain approximately stable regardless of the orientation of the display device (12) (said **customizing viewing position**) [0025]. The same rationale for combining as applied to claim 18 is incorporated herein.

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In regards to claim **36**, with reference to Fig. 8 of Manchester, the sensors (16) can be positioned on the viewer (36) and/or on the display device (12) to sense the orientation of the viewer (said *sightline*) [0027]. The display is then oriented based on the sensed information (said *optimized viewing position*).

In regards to claim **37**, claim 37 recites the same limitations as claim 29. Therefore, the same rationale used for claim 29 is applied.

2. Claim **22** is rejected under 35 U.S.C. 103(a) as being unpatentable over Browning (6,707,581 B1) in view of Manchester (2004/0201595 A1) as applied to claim 18 above, and further in view of Wilz, Sr. et al (6,283,375 B1).

Browning in view of Manchester teaches the limitations of claim 22 with the exception of a ring-type mobile scanning terminal device. However, with reference to Figs. 5A-D of Wilz, Wilz teaches finger-mounted bar code symbol reading device (105). In FIG. 5A, the bar code symbol reading system (105) comprises a finger-supportable laser scanning bar code symbol reading device (106) having a miniature finger-supportable housing (107) with a break-away type finger mounting structure (108, 109); an arm-mounted computer terminal/base unit (110) adapted for support upon the arm of its user, and arranged in data communication with the finger-supportable bar code reading device (106) using a one-way data communication link of the type, and arranged in data communication with the stationary base unit (111) using a two way serial data communication link. The arm-mounted computer-terminal (110) includes a

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touch-type display screen (112) for data entry by pen (e.g. stylus) input operation, and an acoustical signal generator (113) for producing an acoustical acknowledgement signal for the user to hear. The arm-mounted computer-terminal (110) includes an RF transceiver (114) for establishing two-way digital communication with an RF receiver (115) disposed in stationary base unit (111). The stationary base unit (111) includes a serial data communications cable or other communication medium for establishing communication with the host-computer system (116). In this embodiment, when symbol character data is automatically generated, the bar code symbol reading state indicator is driven [col. 40 line 49 – col. 43 line 56].

It would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the scanning device of Browning, with the finger mounted scanning device of Wilz because the finger mounted scanning device would provide comfortable, fatigue-free scanning by not having to physically hold a device.

3. Claim **25** is rejected under 35 U.S.C. 103(a) as being unpatentable over Browning (6,707,581 B1) in view of Manchester (2004/0201595 A1) as applied to claim 18 above, and further in view of Melaku et al. (2003/0144793 A1).

Browning in view of Manchester teaches the limitations of claims 25-28 with the exception of disclosing a graphical representation of a hierarchy of aisles, shelves and single product locations. However, Melaku teaches a system comprising a mobile device or terminal that aides in the identification of a store where the customer may obtain directions to their list of item.

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In regards to claim **25**, the location server database of Melaku, is loaded with a full knowledge of the floor plan. The local server retrieves item information from the local database maps that (X,Y) location to a meaningful indication such as a shelf number in the store [0040]. With reference to Figs. 10, 12, and 14, the display of Melaku presents the user with a graphical representation of many aisles and shelves and the location of items [0058-0062].

It would have been obvious to one of ordinary skill in the art to provide a graphical layout of the product location in order to locate the desired item easily and minimize the time needed to locate the desired item.

4. Claim **26-28** is rejected under 35 U.S.C. 103(a) as being unpatentable over Browning (6,707,581 B1) in view of Manchester (2004/0201595 A1) and Melaku et al. (2003/0144793 A1) as applied to claim 25 above, and further in view of Cardno (2004/0036712 A1).

Browning in view of Manchester and Melaku teaches the limitations of claims 26-28 with the exception of disclosing determining if a product is placed for effective shopping. However, Cardno provides a graphical interface that monitors the traffic flow of stores.

In regards to claims 26-28, the completed list of Melaku contains the item number, price, location (e.g., aisle number, floor number, etc.), current inventory level, traffic level or any other relevant information. The list is tailored to each specific service that is available [0045].

With reference to Fig. 3, a display is arranged to display a contoured representation of customer interest points within retail premises [0036]. Further, by viewing representations produced over a time period, a user would be able to recognize trends, or crowds [0066]. Thus, if there is poor traffic flow near around a particular item in a store, the data shows that the item is not correctly placed, and from the data, can place the item where there is less traffic flow.

Therefore, it would have been obvious to one of ordinary skill in the art to implement the traffic monitoring of Cardno with the invention of Browning recognize trends, or crowds [0066], for proper product placement.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle K. Lay whose telephone number is (571) 272-7661. The examiner can normally be reached on Monday-Friday 7:30a-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee M. Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michelle K. Lay
Patent Examiner
Division 2628
02.22.2007 mkl

Michelle K. Lay
Patent Examiner

A handwritten signature in black ink, appearing to read 'K. M. TUNG', with a long, sweeping horizontal stroke extending to the right.

KEE M. TUNG
SUPERVISORY PATENT EXAMINER